

male food resources requires them to forage on their own and precludes opportunities for establishing reliable alliances with other females. The question then becomes whether, with our heightened self-awareness, we can self-consciously override what millions of years of evolutionary history have apparently prepared us to be.

The comparative approach of looking to other nonhuman primates for insights into human behavior has historical roots. Tracing these roots to primates as genetically similar to us as chimpanzees is an obvious course for those seeking to identify appropriate candidates for comparative analyses. Nonetheless, the implication that somehow human females could solve the problem of male violence and aggression seems unjust in a world where, more often than not, women are the unarmed and unlanded members of our species. But science isn't about finding the answers we necessarily want to hear and if comparisons between humans and chimpanzees lead to the connections about male violence and aggression developed in this book, then we must consider the ways in which humans could be different.

Questions like these provide fast-burning fuel for stimulating debates in seminars and discussions about primate and human continuums. They are aided by the powerful natural history accounts, from chimpanzees to hyenas, detailed in this book. Readers already familiar with the scientific literature on the species depicted will find few flaws with the portrayals they encounter

here. *Demonic Males* never claims to represent a complete selection of primate behavioral variation, so readers looking for more extended comparative examples should not be disappointed to find that primates such as lemurs, in which females bond together to dominate males, and the callitrichids, in which females have turned male competition on its head by enlisting males in the burden of infant care and thus realigning male reproductive strategies to coincide with their own, have been left out. Similarly, *Demonic Males* does not delve deeply into the underlying mechanisms that regulate behavioral variation, so readers interested in understanding the basis of sex differences in aggression at this level will need to consult the primary literature cited.

Remembering that this is a book about aggressive tendencies of both the chimpanzee and human variety, and that it courageously tackles head-on some of the most fundamental questions about the primate continuum to which humans belong, should establish its place among other classics on anthropology reading lists for a long time to come. Wrangham and Peterson offer a comparative perspective from which to think about our past, and from which to contemplate—and choose—our future. Ultimately, it is the challenge to make this choice that makes *Demonic Males* such a provocative book, and so worth reading. The availability of a paperback edition makes it even better.

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HUMAN EVOLUTION IN CHINA: A METRIC DESCRIPTION OF THE FOSSILS AND A REVIEW OF THE SITES. By Xinxhi Wu and Frank E. Poirier. New York: Oxford University Press. 1995. 317 pp. ISBN 0-19-507432-7. \$65.00 (cloth).

The publication of this book marks the hopeful beginning of a new era of interna-

tional cooperation among students of hominoid and hominid evolution in China. This thorough account lists all the known sites to have yielded hominid or hominoid fossil specimens. The relevant fossils are described for each site entry and, where available, summaries of the stratigraphy, archaeology, and associated fauna are included. These entries are organized into chapters

based on the taxonomic affinity of the fossils: "*Homo erectus*," "Archaic *Homo sapiens*," "Anatomically Modern *Homo sapiens*," and non-hominid hominoids. A chapter on the authors' phylogenetic interpretations of the sample is also included. Thus, a potential treasure trove of raw information is placed at the reader's fingertips. Of particular use is the 53-page section on the Zhoukoudian sample, which is certain to become an important new source, given the vanishing availability of Weidenreich's original monographs. This section was summarized from Weidenreich's work, as well as that of the Chinese researchers who described remains unearthed after World War II.

The documentation provided in the chapter "Anatomically Modern *Homo sapiens*" is especially noteworthy. Covering nearly 40 sites, the material included could be quite important to the resolution of the current debate over the mode of emergence of our own species, were it not for a paucity of radiometric dates. This is not to draw attention from the remainder of the book, however. The quality of the descriptions provided for Asia's endemic hominoid and early hominid species is exceedingly well executed. As its preface observes, this book is the result of "a new openness" between scientists from both sides of the globe. If *Human Evolution in China* is at all representative of what can be further expected from China, paleoanthropology can look forward to a more lucid, detailed understanding of this important sample.

The book is weaker, however, in the phylogenetic interpretations of Chapter 5, "Evolution and Dispersal." Here the authors seem to have difficulty widening their temporal and geographic scope beyond the materials described. While the Chinese sample is offered as evidence for regional continuity between *Homo erectus* and local, extant *Homo sapiens*, it is not convincingly presented as evidence *against* the "Out-of-Africa" hypothesis. For example, African crania predate many of the key Chinese materials in their scenario (Zhoukoudian, Dali, Xujiayao), but have a temporal bone morphology more like living *H. sapiens*. These include the *Homo heidelbergensis* cranium from Bodo, at 600 KYA (see Rightmire,

1996), and the possible male *Homo ergaster* cranium, OH 9, at 1.4 MYA (see Rightmire, 1979). Attributing the appearance (in the form of the Liujiang cranium) of modern temporal morphology in China at 60 KYA as the mere product of gene flow seems counter-intuitive. Such issues remain unaddressed by the comparisons (of no clear value) between the Chinese Pleistocene fossils and contemporaneous forms such as Neanderthals and their European antecedents.

Wu and Poirier suggest that the lack of Paleolithic tool-kit change within China provides evidence against a migration event (p. 237).

Specifically, they postulate that if the Levantine *H. sapiens* populations of Skhul and Qafzeh had dispersed eastward, their Levallois techniques should be found in the "Late Paleolithic," sapiens-associated sites in China. This is not the case. But instead of considering alternative explanations—such as a lack of suitable raw materials, or an opportunistic use of more perishable tools—this is taken as evidence for no movement of *H. sapiens* into China. To our knowledge, the absence of Levallois technique (*sensu strictu*) is a feature characterizing post-Middle Paleolithic stone tool assemblages (whether they are called "Late" or "Upper") the world over. The practice of correlating artifact type with biological evolution has always been questionable; if the authors intend this approach to support their theories convincingly, then at least more detailed accounts of the associated artifacts should have been included, along with such data from other Paleolithic sites.

Similar examples abound. While the Introduction (p. 7) acknowledges the view that *H. erectus* is a species separate from similar forms in Africa, the authors make no mention of the contemporaneity of the Pucangan formation hominids in Java with the African fossils in question. Instead, they consider an African ancestry for the Asian species. In addition, the still older finds from the site of Wushan, also known as Longgupo (Huang Wanpo et al., 1995), are treated only cursorily. These remains were extensively documented in a 1991 monograph published in China (Huang Wanpo et al., 1991) and should have been discussed more fully by Wu and

Poirier. The early Javanese and Chinese finds are among the growing body of evidence suggesting that *Homo ergaster* in Africa and *Homo erectus* in Asia are sister taxa, possibly descended from a third, poorly known paleospecies.

Finally, the authors overlook the argument that some of the well-known features of *Homo erectus* are autapomorphic (p. 237). While previous research (Brauer and Mbua, 1992) has demonstrated the plesiomorphic nature of these same features (in some cases as far back as *A. africanus*), the authors seem unaware of this work and cite those Chinese hominids which they term "Archaic *Homo sapiens*" as evidence that the characteristic features of *Homo erectus* (sagittal keeling, thick crania, etc.) are as frequent in the "Archaic" sample and thus of little use as discriminants between them. This is intriguing, because the phylogenetic and taxonomic status of this archaic Asian sample (represented by Dali, Maba, etc.) is a critical issue in need of resolution. Wu and Poirier's scenario of direct descent from Chinese *Homo erectus* is only one of several possible interpretations for this more recent sample. Significantly, the authors do not propose the traits above as evidence for links between the "Archaic" and the "Anatomically Modern" samples. They advance instead another suite of traits, many of them facial, to reveal the allegedly unilineal linkage between these Chinese hominid samples. This argument is

weakened in that the face is one of the least-known regions of the *Homo erectus* skull, however, and the one fossil that could potentially support the authors' scenario—the recently discovered *Homo erectus* face from Tangshan—receives only cursory coverage (p. 91).

Despite our caviling, the fact remains that this volume is the only one of its kind in English today, and its quality and utility are undeniable. Many students of paleoanthropology may soon find themselves referring to its pages to enrich their own research. Recommended.

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